

Date: Mon, 17 May 93 17:06:11 PDT
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>
Errors-To: Info-Hams-Errors@UCSD.Edu
Reply-To: Info-Hams@UCSD.Edu
Precedence: Bulk
Subject: Info-Hams Digest V93 #598
To: Info-Hams

Info-Hams Digest Mon, 17 May 93 Volume 93 : Issue 598

Today's Topics:

 AMTOR question
 Any RNARS members on this net?
 BUY BACK 11 METERS! (was Re: Selling t
 Don't get ripped off by a G5RV
 Going about building your first transceiver??
 icom 3sat internal battery
 Macintosh compatible morse code training programs (2 msgs)
 Need Internet access, Aberdeen MD
 Radio Shack 440-Rig (HTX-404)
 Ramsey SCA Kit and pro-2004
 Thanks for those who replied: (re:Frequency)
 Why do they DO that? (2 msgs)

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text
herein consists of personal comments and does not represent the official
policies or positions of any party. Your mileage may vary. So there.

Date: 17 May 1993 20:53:53 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
zaphod.mps.ohio-state.edu!sdd.hp.com!hpscit.sc.hp.com!rkarlqu@network.UCSD.EDU
Subject: AMTOR question
To: info-hams@ucsd.edu

William E Van Horne (wvanhorn@magnus.acs.ohio-state.edu) wrote:

:
: Dear Rob:
:
: The "AMTOR" with long-duration (approx 1 second) bursts that you heard

: is PACTOR.
:
: Pactor is a mode invented about 3 years ago in Germany, now widely
: available in the USA. For the user it is very similar to AMTOR but

The thing that always kept me from getting onto AMTOR was that my
transceiver took more than 20 msec. to switchover from TX to RX or
vice versa, so I couldn't work nearby stations on AMTOR. Is PACTOR
any better in this respect?

Rick N6RK
rkarlqu@scd.hp.com

Date: Mon, 17 May 1993 10:04:50
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!gatech!
enterpoop.mit.edu!lard.ftp.com!nw1j.ftp.com!mrioux@network.UCSD.EDU
Subject: Any RNARS members on this net?
To: info-hams@ucsd.edu

In article <93137.140440WKOEHLE@ESOC.BITNET> WOLF KOEHLER <WKOEHLE@ESOC.BITNET>
writes:

> I wonder whether there are any members of the RNARS, aka as the
> Royal Naval Amateur Radio Society, using this net. If so I would
> appreciate a reply by e-mail.

> 73, Wolf, RNARS 3419.
> DL3ZBJ, AB6EL, VK6BGV.

Yep, you found one! #3889, I usually make the DX nets on Sat, and Sun on
15 and 20 meters that WA1HMY and WD4CQY run. 73 es hpe to cu on the net.

--

Mike Rioux, NW1J Internet: mrioux@ftp.com #
FTP Software, Inc. Phone: (508) 659-6347 #
2 High Street Fax: (508) 794-4477 #
North Andover, MA 01845 #
"Americans have the right and advantage of being armed - #
unlike the citizens of other countries whose governments #
are afraid to trust the people with arms." #
- James Madison #
#####

Date: 17 May 93 14:38:45 CDT

From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
ux1.cso.uiuc.edu!uchinews!raistlin!timbuk.cray.com!hemlock.cray.com!cherry10!
dadams@network.UCSD.EDU
Subject: BUY BACK 11 METERS! (was Re: Selling t
To: info-hams@ucsd.edu

In article 140593155615@donsmacfx.lasc.lockheed.com,
woodward@hercii.lasc.lockheed.com (Don Woodward Jr.) writes:
|In article <1993May13.204520.3947@ttinews.tti.com>, sorgatz@avatar.tti.com
|(Erik Sorgatz) wrote:
|>
|> This is actually GOOD NEWS in disguise...let's all write the ARRL and
|> lobby for the OUTRIGHT PURCHASE of the 27.4051-28.0 MHz band segment!!
|>
|> In effect let's BUY BACK 11 METERS AS AN AMATEUR ALLOCATION! It's NOT
|> CURRENTLY ASSIGNED. IT'S ADJACENT TO OUR 10 METER ALLOCATION and it's
|> probably not a very attractive area for commercial applications..hence
|> the price should be low enough to allow the Amateur community to afford
|> it without worrying about the CBers outbidding us.
|>
|> Comments?
|
|I'd rather have 148-150mhz where we could unburden the 2 meter band of its
|overcrowdedness.
|

Or what about 220-222 Mhz?

--David C. Adams Statistician Cray Research Inc. dadams@cray.com

Old cowboys never die. They just smell that way!

Date: 17 May 93 23:41:10 GMT
From: pa.dec.com!nntpd2.cxo.dec.com!nuts2u.enet.dec.com!little@decwrl.dec.com
Subject: Don't get ripped off by a G5RV
To: info-hams@ucsd.edu

ignacy@misz.animal.uiuc.edu writes:

>In <1111@auratek.UUCP> epacyna@auratek.UUCP (Edward Pacyna) writes:
>.....
>>The G5RV is not a multiband antenna. Using MININEC, I modeled this antenna
>>and the SWR is much too high to be using coax feed. The SWR varied between
>>50:1 to 100:1 on all the other bands! The transmission line loss now becomes
>>significant. The G5RV is now part antenna and part dummy load. Your 100W

>>station is now QRP. With a 6dB loss, only 6.25W will reach the your antenna;
>>and a 9 dB loss will only get 3W (97% loss) to the antenna.

>>

>

>Reports from other hams, as well as my experience, shows that G5RV
>works with acceptable SWR (in my case < 3:1) on all bands, and a low
>SWR on some bands (in my case close to 1:1 on 7-21MHz). If MININEC
>does not show this, there is a problem with MININEC or its G5RV file.
>Observation has priority over theory!

The SWR as measured at the transmitter will be less than 3:1 *because* of the resistive losses in the coax. So although the SWR seems reasonable, it's only because you are heating the coax feed line. G5RV has stated that the antenna is 3/2 wavelength antenna on 20 meters and a random length wire on all other bands. No amount of open wire feeder or coax or combination can yield a good match across all bands without a tuner. To get a true indication of the antennas operation, measure the SWR at the antenna and at the open wire to coax junction. Don't be suprised if you can't get an accurate measurement as most SWR meters won't handle the high SWR you are likely to find.

73,
Todd
N9MWB

Date: 17 May 1993 19:57:26 GMT
From: haven.umd.edu!cs.umd.edu!mojo.eng.umd.edu!chuck@ames.arpa
Subject: Going about building your first transceiver??
To: info-hams@ucsd.edu

In article <2311@indep1.UUCP> clifto@indep1.UUCP (Cliff Sharp) writes:

->In article <1t0mb0INNfb7@mojo.eng.umd.edu> chuck@eng.umd.edu (Chuck Harris - WA3UQV) writes:

->:Not me! If you have an open wound on each hand, the 12v battery, in contact
->:with each wound, will kill you just fine. It's the current that kills you;
->:it's your skin's resistance that keeps the low voltages from building up
->:enough current to harm you, usually.

->:

->:The resistance of the essentially salt water that is beneath your skin is very
->:low. A 12 volt battery can produce more than enough current through damaged
->:skin to disrupt your heart.

->

-> From the Merck Manual, Fourteenth Edition, page 2134:

-> "Dry, well-keratinized, intact skin may have a resistance of several
->hundred thousand ohms, whereas the resistance of moist, thin skin is about
->500 ohms. If the skin is punctured (e.g., from a cut or abrasion, or by a

->needle), or if current is applied to moist mucous membranes (e.g., mouth, ->rectum, vagina), the [body] resistance may be as low as 200 to 300 ohms."

Basically, Merck aren't engineers, consequently, they didn't bother to tell you important little things like electrode placement, size... They provided this information for general information purposes. They didn't expect you to use it for calculating power dissipation in a pancreas at 12 volts.

The body's internal resistance varies all over the place depending on how big the "electrodes" are, how deep they penetrate, and how far they are apart, their proximity to major muscles, veins, organs...

->:12v sources terminals, or circuitry. It happens to mechanics from time to ->:time, when wrenches slip, or hands get burned and quickly withdraw.

No, in my scenerio: the wrenched slipped, and the muscle force applied to turn the wrench drove the hand into a sharp immovable "electrode"; or the hand got thermally burned (hot manifold), and the spinal reflex caused the hand to withdraw violently, forcing the hand/elbow into a sharp immovable "electrode".

->

-> It's usually a combination of the bright spark (scary, makes you jump)

This is yet another method of propelling your hand/elbow into a sharp contact.

-> Believe me, I've both wet my arms and chest and held the battery ->terminals as a demonstration, I've also had the misfortune of shorting

You are still well protected by the inherent high resistance of your skin, even when wet. See your above data.

If you want to do the real demonstration, you will have to badly cut your elbow on the body of your car, and simultaneously drive your palm into a sharp 12v battery terminal (the starter solenoid will do). Your heart will stop.

Chuck Harris - WA3UQV
chuck@eng.umd.edu

Date: 17 May 1993 16:09:50 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!ux1.lbl.gov!mikec@network.UCSD.EDU
Subject: icom 3sat internal battery
To: info-hams@ucsd.edu

My internal pack seems to have a dead cell, does anyone have any recommendations of 3rd party vendors for internal 3sat 7.2V packs?

mike chin

Date: 17 May 93 18:40:02 GMT
From: nwnexus!a2i!davidj@uunet.uu.net
Subject: Macintosh compatible morse code training programs
To: info-hams@ucsd.edu

In <1993May17.083800.13046@usl.edu> jab0684@ucs.usl.edu (Boudreaux Jean A) writes:

> Title says it all anyone have an ftp where I can locate one of these for
> a future ham(hopefully).

>73 DE kb5udf

Look in apple.com:pub/hamradio, there are several.

--

Josephson Engineering, San Jose California MICROPHONES
Tel/ 408-238-6062 Fax/ 408-238-6022 INSTRUMENTATION
email:david@josephson.com ftp info from: rahul.net /pub/davidj/

Date: 17 May 93 20:35:46 GMT
From: usenet.coe.montana.edu!netnews.nwnet.net!serval!wsuvm1.csc.wsu.edu!
HOPPER@decwrl.dec.com
Subject: Macintosh compatible morse code training programs
To: info-hams@ucsd.edu

In article <1993May17.083800.13046@usl.edu>
jab0684@ucs.usl.edu (Boudreaux Jean A) writes:

> Title says it all anyone have an ftp where I can locate one of these for
> a future ham(hopefully).

>

>73 DE kb5udf

Several kind souls directed me to 129.180.4.7 (grivel.une.edu.au)
I have downloaded two programs that I found useful. Morse Mania and
MORSE CODE TUTOR both are good but so far nothing matches Super Morse for
the PC.

Also, the programs are in pub/ham-radio/mac-files

On another note, maybe sources of mac programs for amateur radio should be in the FAQ or some kind of regularly posted document. Any volunteers? If not, send what you know to me and I'll compile something.

Grant Hopper Hopper@WSUVM1.csc.wsu.edu

Date: 17 May 93 13:21:59 GMT
From: saimiri.primate.wisc.edu!usenet.coe.montana.edu!logicse!usenet.ee.pdx.edu!
fastrac.llnl.gov!wsrcc.com!wetware!spunky.RedBrick.COM!psinntp!psinntp!panix!
oppedahl@ames.arpa
Subject: Need Internet access, Aberdeen MD
To: info-hams@ucsd.edu

In <1993May15.095358.23931@udel.edu> penneys@pecan.cns.udel.edu (robert penneys) writes:

>Got a buddy in Aberdeen, MD who wants Internet access. Anyone know of
>public or private access in that area, including Baltimore, or access
>thru packet?

There is a newsgroup which you might not know about, called
alt.internet.access.wanted. It is perfect for your query.
(I realize you may not have access to that group, in which case
that would be why you did not post to it.)
Anyway, if you can I suggest you post to that group.

If you are not able to post to that group directly, you may
wish to consider using one of the services that lets you post
via email. For example, you could post to

alt.internet.access.wanted.usenet@decwrl.dec.com

and state in your posting that you would like to get responses
via email.

Best of luck.

--

Carl Oppedahl AA2KW (intellectual property lawyer)
30 Rockefeller Plaza
New York, NY 10112-0228
voice 212-408-2578 fax 212-765-2519

Date: 14 May 93 14:01 CDT
From: news.acns.nwu.edu!zaphod.mps.ohio-state.edu!cs.utexas.edu!csc.ti.com!
tilde.csc.ti.com!m2.dseg.ti.com!ernest!egsner!convex!seas.smu.edu!utacfd.uta.edu!
trsvax!trsvax!rpo@network.UCSD.
Subject: Radio Shack 440-Rig (HTX-404)
To: info-hams@ucsd.edu

Radio Shack HTX-404 440 MHz (70 cm) Amateur UHF FM Transceiver

If you look at your latest copy of QST, you will find a review of the new Radio Shack 440 MHz scanner. This is a brief summary of the transceiver's specs. When I made a similar posting about the HTX-202 when it first came out, I received complaints that I was 'promoting.' Note that this posting is not intended to promote, but to inform the amateurs on the net of the unit's listed specs. I apologize in advance to anyone that has a different definition of 'promoting' that would include this post.

(These won't be available in quantity until mid-Summer.)

SPECIFICATIONS

General

Frequency Range	440 - 450 MHz (Modifiable to 430 - 450 MHz)
Frequency Steps	5/10/15/20/25/50/100 kHz
Frequency Stability	+/- 10 ppm
Antenna Impedance	50 Ohms Unbalanced
Speaker	8 Ohms
Microphone	Condenser Mic, 1.2 kOhms
Channel Display	LCD 8 digits
Operating Temperature	14 to 140 deg F
Size	2 9/16 x 4 5/8 x 1 7/8 Inches
Weight	1 lb, 3 ozs
Supply Voltage	
Alkaline Battery Pack	9 VDC
Ni-Cad Batter Pack (600 mAh)	7.2 VDC
External Power Jack	7.2 to 13.8 VDC

Receiver

1st IF	45 MHz
2nd IF	455 kHz
Sensitivity	0.2 uV (12 dB SINAD)
	0.35 uV (20 dB NQ)
Squelch Sensitivity	

Threshold 0.1 uV
 Tight 10 dB above threshold
 Spurious Response Attenuation 60 dB
 Intermodulation Attenuation 60 dB
 Adjacent Channel Rejection (25 kHz) 50 dB
 Modulation Acceptance Bandwidth ... 9 kHz
 Hum and Noise 35 dB
 Audio Output Power (10% THD):
 7.2VDC 0.3W
 9 VDC 0.5W
 12 VDC 1W
 13.8 VDC 1W
 Audio Distortion 2%
 Audio Response -6 dB/Octave
 Current Drain
 Standby w/Power Save 35 mA
 Standby wo/Power Save 25 mA
 CTCSS Sensitivity 0.15 uV
 DTMF Squelch Sensitivity 0.2 uV

Transmitter

RF Power Output
 7.2 VDC 1.5W
 9 VDC 2.5W
 > 12 VDC 5W
 Low Power 0.5W
 Maximum Deviation 4.5 kHz
 Hum and Noise 35 dB
 Audio Distortion 0.5%
 Audio Response +6 dB/Octive
 Spurious and Harmonic Emissions ... 70 dB
 Frequency Error +/- 0.0005%
 Microphone Sensitivity 4 mV rms
 CTCSS Tone Deviation 0.7 kHz
 DTMF Tone Deviation 3.5 kHz
 Current Drain:
 7.2 VDC 1.2A
 9 VDC 1.4A
 12 VDC 1.6A
 13.8 VDC 1.8A
 Low Power 0.8A

It includes CTCSS, DTMF, DTMF page, 16 memories, DTMF memory, and operates almost identically to the HTX-202. Price is \$299.

For a comprehensive review, see this month's QST.

Paul Opitz
Radio Shack Publications

Date: 17 May 93 23:27:32 GMT
From: news-mail-gateway@ucsd.edu
Subject: Ramsey SCA Kit and pro-2004
To: info-hams@ucsd.edu

The proper place to tap the PRO-2004 for SCA happens to be test point TP3 which is near the center of the main (LINEAR) PC board.

On the PRO-2005/6, it is test point TP1 which is under the smaller covered enclosure parallel to connector CN1. (The 2004 test point is not under a cover however.).

In both cases, tape the test point via a low (.01 uf will do) capacitor but I suspect the Ramsey unit already has one.

Not sure about Canadian law but in the US, non-authorized SCA listening is explicitly forbidden by the ECPA.

--

David L. Wilson INTERNET: dwilson@s850.mwc.edu
Phone: (703) 898-1084 (H) Amateur callsign: AC4IU

Date: Mon, 17 May 1993 17:23:03 EDT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!gatech!psuvax1!psuvm!axh113@network.UCSD.EDU
Subject: Thanks for those who replied: (re:Frequency)
To: info-hams@ucsd.edu

>Hi,

>I am travelling to Washington D.C. from State College PA. Could anyone
>please provide me with some repeater freq. along the way, or please,
>the repeater freq. in the D.C. area. Ok, thanks.

Many thanks to those who replied. There were suggestions for me to get
teh freq. guide. I guess I get one soon because I do travel a lot.

-Azmi, N3ODN

Date: 17 May 1993 21:32:55 GMT

From: mvb.saic.com!unogate!news.service.uci.edu!usc!cs.utexas.edu!asuvax!chnews!
joshua!jbromley@network.UCSD.EDU
Subject: Why do they DO that?
To: info-hams@ucsd.edu

eesnyder@boulder.Colorado.EDU (Eric E. Snyder) posts:

>I have a slightly different question: to what use do hams
>put these our-of-band frequencies?

There are legitimate and illegitimate uses for out-of-band mods.

Legitimate: Hams participate in Civil Air Patrol and Military
Affiliate Radio Service (MARS) radio nets that
use frequencies a few MHz above or below the amateur
2-meter band.

Illegitimate: Some hams have business-band or emergency-service
licenses or authorizations and use their ham HT's
on those channels instead of the very expensive
(~\$2000) commercial HT's. This is a violation
of FCC rules since commercial radios must be
type-accepted for those services. Ham HT's
with their user-adjustable frequency selectors
are not and will never be type-accepted. (But
they generally work OK).

In case you are wondering, you have just found one of the big
"controlled substance" problems of amateur radio. And you thought
this kind of stuff only happened on Alt.Drugs :-).

>this. However, I would be a little worried about
>accidentally keying the mic on the local police repeater
>(DISPATCH: all city and county units move to BLUE; we have
>a stuck mic on GREEN) since I also like to scan the public
>service freqs. Any ideas?

If you read your manual carefully, I *think* you might find that the
530 already *receives* most of the public service frequencies. So
you really don't have to enable the out-of-band transmit capability
to monitor. And this alleviates the risk of jamming the very people
you are trying to listen to.

>(BTW: I just passed my exam
>last week, so be nice if this question is painfully
>obvious.)

Congrats on getting the license and welcome to the fray.

I think there is some stuff in the FAQ about this (or there should be).
But this has also been a hot topic in the group over the past
few months, so it's still fair game.

(BTW, originally tried to mail this, but mail-wise we seem to have
dropped out of the visible universe.)

```
+-----+-----+
| Jim Bromley W5GYJ          |                               |
| Intel Corp. m/s CH3-91    | (no-code whining deleted to save net.bandwidth) |
| 5000 W. Chandler Blvd.    |                               |
| Chandler,AZ 85226         |                               |
| tel: 602-554-5183         | Internet: jlbromley@sedona.intel.com |
+-----+-----+
```

Date: Mon, 17 May 1993 20:04:56 GMT
From: usc!howland.reston.ans.net!darwin.sura.net!news-feed-1.peachnet.edu!umn.edu!
csus.edu!netcom.com!netcomsv!attain!icd.teradyne.com!news@network.UCSD.EDU
Subject: Why do they DO that?
To: info-hams@ucsd.edu

In article <1993May13.162900.117@muvm6.wvnet.edu> rcomm@muvm6.wvnet.edu writes:
-I have been reading quite a lot here about how various HT's and scanners and
-such are modify-able. As the HTs are concerned, a user may modify the radio to
-transmit outside of designated amateur bands. My question is WHY do
-manufacturers knowingly engineer and manufacture radios that can do this?

No real technical reason (the HTX-202 can only transmit or receive on the
2M band), but there are a few good reasons. Ham bands vary around the
world, and this way onde design, with different diodes or jumpers) will work
anywhere. Also, this gives you more freedom when designing transverters to
work on other bands.

Does anyone know why Icom required me to perform the out-of-band mod on
my 24at in order to transmit within the ham band at 439 MHz?

/mike

--
\\| Michael L. Ardai N1IST Teradyne ATG Boston
/|\ ardai@maven.dnet.teradyne.com

Date: Mon, 17 May 1993 20:02:13 GMT
From: dog.ee.lbl.gov!overload.lbl.gov!agate!howland.reston.ans.net!
ux1.cso.uiuc.edu!uwm.edu!linac!att!att!gtephx!dalyb@network.UCSD.EDU
To: info-hams@ucsd.edu

References <930421130108@nauvax.ucc.nau.edu>, <103360180@hpfco.FC.HP.COM>,
<2295@indep1.UUCP>.cso.
Subject : Re: What is circular polarization?

In article <2295@indep1.UUCP>, clifto@indep1.UUCP (Cliff Sharp) writes:

>
> Can anyone post a nice, complete, accurate, succinct explanation of exactly
> what it is and how it works, all in one article meant for us antenna
> fumblefinger types to save for all eternity?
> --

Basically, polarization refers to the pattern that the electric field traces as it propagates through space. The electric field changes in both magnitude and direction as the wave travels through space.

Linear polarization is when the electric field lies entirely in one line. Typically, you hear of horizontal and vertical polarization -- these are linearly polarized waves. Horizontal means the electric field is in the horizontal plane, and vertical meaning the electric field is in the vertical plane. The direction of the electric field is always on this line, but the magnitude changes over time.

Now, for elliptical polarization, the electrical field is contained in two planes. This plane is perpendicular to the direction of propagation. If you look at the electric field at any one instance in time, it will have a magnitude and direction. This magnitude and direction changes over time; if you plot out these changes over a sufficient time interval, the plot will take the form of an ellipse. Circular polarization is a special case of elliptical polarization, because a circle is an ellipse whose major and minor axis are equal.

You can also characterize the circularly polarized field by the direction that the electric field moves around the circle. Looking in the direction of propagation, if the field moves clockwise around the circle, it is termed a right hand circularly polarized wave. If it moves counterclockwise, then it is a left hand circularly polarized wave.

Polarization is very important. One of the losses in a communication link is due to polarization mismatches. For example, commercial TV broadcasts from

antennas

that are horizontally polarized. The receiving antenna also must be horizontally polarized, or else there will be a high polarization mismatch loss. This is why you install

a TV antenna horizontally rather than vertically. Similarly, 2 meter repeaters have vertically polarized antennas, so your 2 meter antenna should be vertically polarized.

Elliptical (circular) polarization is typically used for satellite communications. A typical antenna that generates a circularly polarized wave is the helical antenna. If you look at the direction of the winding of the helix in the direction of propagation, you can tell if it is a right hand or left hand polarized antenna.

One of the interesting things about elliptical polarization is reflections off a surface -- they can change the direction of polarization (right hand to left hand).

Now, without getting into vectors and some more antenna theory, this should give a general description of polarization.

--

Brian K. Daly WB7OML @ AG Communication Systems, Phoenix, Arizona

Disclaimer: Anything stated above is my own opinion, and NOT that of my employer.

UUCP: {...!ames!ncar!noao!enuucp | uunet!zardoz!hrc | att}!gtephx!dalyb

Phone: (602) 582-7644 FAX: (602) 582-7111

End of Info-Hams Digest V93 #598
